

02560035BC

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of

T. Rappaport, et. al.

Serial No.: (not yet assigned) Group Art Unit: not yet assigned  
(Divisional application of 09/633,120)

Filed: Concurrently Examiner not yet assigned

For: Improved Method and System for a Building Database Manipulator

Commissioner of Patents  
P.O. Box 1450  
Alexandria 22313-1450

**INFORMATION DISCLOSURE STATEMENT**

Sir:

Under the provisions of 37 C.F.R. 1.97 through 1.99 and pursuant to applicant's duty of disclosure under 37 C.F.R. 1.56, applicants respectfully bring the following documents, listed on the attached form PTO-1449, to the attention of the Examiner in charge of the above-identified application. The references cited in the attached PTO-1449 are readily available to the Examiner in co-pending parent U.S. application Serial No: 09/633,120. Thus, according to the rules of practice, these references are not provided herein, but are listed on the PTO-1449 form and should be considered by the Examiner. If the Examiner is unable to obtain the listed references, applicant will gladly provide such references upon notification by the Examiner in charge of the examination of the above-identified application.

These citations do not constitute an admission that the references are relevant or material to the claims. They are only cited as constituting related art of which the applicant is aware.

02560035BC

It is respectfully requested that the listed references be considered by the Examiner and formally made of record in this application.

Please charge any deficiencies in fees and credit any overpayment of fees to attorney's Deposit Account No. 50-2041.

Respectfully submitted,



Michael E. Whitham  
Registration No.: 32,635

Date: March 24, 2004  
Whitham, Curtis & Christofferson, PC  
11491 Sunset Hills Road - #340  
Reston, VA 20190  
703/787-94000

Please associate this  
Application with  
Customer No. 30743

**INFORMATION DISCLOSURE CITATION**  
*(Use several sheets if necessary)*

Docket Number (Optional) 02560035B C	Application Number not assigned
Applicant(s) <b>T. Rappaport, et al.</b>	
Filing Date concurrently	Group Art Unit not assigned

**U.S. PATENT DOCUMENTS**

EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
1		4,675,147	6-23-87	Schaefer et al.			4-6-83
2		4,736,453	4-5-88	Schloemer			12-10-85
3		4,885,694	12-5-89	Pray et al.			4-29-87
4		5,111,392	5-5-92	Malin			6-9-89
5		5,119,307	6-2-92	Blaha et al.			12-22-89
6		5,239,487	8-24-93	Horejsi et al.			10-24-90
7		5,293,640	3-8-94	Gunmar et al.			
8		5,307,261	4-26-94	Maki et al.			6-28-91
9		5,337,149	8-9-94	Kozah et al.			11-12-92
10		5,339,184	8-16-94	Tang			6-15-92
11		5,375,123	12-20-94	Andersson et al.			2-5-93

**FOREIGN PATENT DOCUMENTS**

REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						YES	NO

**OTHER DOCUMENTS** *(Including Author, Title, Date, Pertinent Pages, Etc.)*


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12		5,394,522	2-28-95	Sanchez-Frank et al.			9-13-93
13		5,450,615	9-12-95	Fortune et al.			12-22-93
14		5,458,123	10-17-95	Unger			4-29-94
15		5,465,390	11-7-95	Cohen			2-12-93
16		5,482,050	1-9-96	Smokoff et al.			2-17-94
17		5,485,568	1-16-96	Venable et al.			10-8-93
18		5,491,644	2-13-96	Pickering et al.			9-7-93
19		5,491,837	2-13-96	Haartsen			3-7-94
20		5,493,679	2-20-96	Virgil et al.			10-29-93
21		5,515,269	5-7-96	Willis et al.			11-8-93
22		5,528,518	6-18-96	Bradshaw et al.			10-25-94

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	23	5,539,665	7-23-96	Lamming et al.			7-25-94
	24	5,553,312	9-3-96	Gattey et al.			6-20-94
	25	5,553,620	9-10-96	Snider et al.			5-2-95
	26	5,555,354	9-10-96	Strasnick et al.			3-23-93
	27	5,561,841	10-1-96	Markus			
	28	5,564,070	10-8-96	Want et al.			7-30-93
	29	5,594,946	1-14-97	Menich et al.			2-28-95
	30	5,598,532	1-28-97	Liron			10-21-93
	31	5,625,827	4-29-97	Krause et al.			12-23-94
	32	5,636,344	6-3-97	Lewis			8-22-91
	33	5,689,355	11-18-97	Okubo et al.			7-1-96

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	34	5,761,093	6-2-98	Urbish et al.			5-8-97
	35	5,794,128	8-11-98	Brockel et al.			9-20-95
	36	5,799,154	8-25-98	Kuriyan			6-27-96
	37	5,809,282	8-15-98	Cooper et al			6-7-95
	38	5,815,395	9-29-98	Hart et al.			6-29-95
	39	5,828,960	10-27-98	Tang et al.			3-31-95
	40	5,831,610	11-3-98	Tonelli et al.			2-23-96
	41	5,832,389	11-3-98	Dent			4-3-96
	42	5,861,887	1-19-99	Butler et al.			12-5-95
	43	5,867,112	2-2-99	Kost			5-14-91
	44	5,877,777	3-2-99	Colwell			4-7-97

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45		<b>5,878,328</b>	3-2-99	Chawla et al.			<b>12-21-95</b>
46		<b>5,907,850</b>	5-25-99	Krause et al.			<b>1-21-97</b>
47		<b>5,917,808</b>	6-29-99	Kosbab			<b>1-17-97</b>
48		<b>5,923,850</b>	7-13-99	Barroux			<b>6-28-96</b>
49		<b>5,926,762</b>	7-20-99	Arpee et al.			<b>5-17-96</b>
50		<b>5,940,196</b>	8-17-99	Piehler et al.			<b>5-16-97</b>
51		<b>5,945,976</b>	8-31-99	Iwamura et al.			<b>12-10-96</b>
52		<b>5,948,055</b>	9-7-99	Pulsipher et al.			<b>8-29-96</b>
53		<b>5,949,335</b>	9-7-99	Maynard			<b>4-14-98</b>
54		<b>5,949,988</b>	9-7-99	Feisullin et al.			<b>4-3-97</b>
55		<b>5,953,669</b>	9-14-99	Stratis et al.			<b>12-11-97</b>

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	56	<b>5,963,867</b>	<b>10-5-99</b>	<b>Reynolds et al.</b>			<b>8-16-95</b>
	57	<b>5,970,406</b>	<b>10-19-99</b>	<b>Komara</b>			<b>12-31-96</b>
	58	<b>5,987,328</b>	<b>11-16-99</b>	<b>Ephremides et al.</b>			<b>4-24-97</b>
	59	<b>6,006,021</b>	<b>12-21-99</b>	<b>Tognazzini</b>			<b>7-1-96</b>
	60	<b>6,018,625</b>	<b>1-25-00</b>	<b>Hayball et al.</b>			<b>8-27-97</b>
	61	<b>6,021,316</b>	<b>2-1-00</b>	<b>Heiska et al.</b>			
	62	<b>6,032,105</b>	<b>2-29-00</b>	<b>Lee et al.</b>			<b>7-31-97</b>
	63	<b>6,038,547</b>	<b>3-14-00</b>	<b>Casto</b>			<b>1-7-98</b>
	64	<b>6,044,273</b>	<b>3-28-00</b>	<b>Tekinay</b>			<b>12-10-96</b>
	65	<b>6,058,102</b>	<b>5-2-00</b>	<b>Drysdale et al</b>			<b>11-6-98</b>
	66	<b>6,058,262</b>	<b>5-2-00</b>	<b>Kawas et al.</b>			<b>4-18-97</b>

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	67	6,059,842	5-9-00	Dumarot et al.			4-14-98
	68	6,061,722	5-9-00	Lipa et al.			12-23-96
	69	6,075,541	6-13-00	Maclinovsky			11-7-97
	70	6,088,522	7-11-00	Lee et al.			7-31-97
	71	6,104,699	8-15-00	Holender et al.			
	72	6,108,309	8-22-00	Cohoe et al.			12-8-97
	73	6,111,857	8-29-00	Soliman et al.			9-11-97
	74	6,122,083	9-19-00	Ohta et al.			10-3-94
	75	6,148,010	11-14-00	Sutton et al.			6-24-98
	76	6,199,032	3-6-01	Anderson			7-22-98
	77	6,204,813	3-20-01	Wadell et al.			2-20-98

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	78	6,208,833	3-27-01	Preschutti et al.			6-24-97
	79	6,229,540	5-8-01	Tonelli et al.			10-13-98
	80	6,253,086	6-26-01	Parantainen et al.			3-25-99
	81	6,285,377	9-4-01	Greenbaum et al.			6-26-97
	82	6,289,203	9-11-01	Smith et al.			2-25-98
	83	6,317,599	11-13-01	Rappaport et al.			5-26-99
	84	6,326,987	12-4-01	Alexander			12-19-00
	85	6,330,005	12-11-01	Tonelli et al.			10-6-99
	86	6,311,144	10-30-01	Abu El Ata			7-31-98
	87	6,337,688	1-8-02	Berstis			1-29-99
	88	6,338,031	1-8-02	Lee et al.			9-23-99

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89		6,356,758	3-12-02	Almeida et al.			12-31-97
90		6,393,432	5-21-02	Flansburg et al.			6-2-99
91		6,408,312	6-18-02	Forthman et al.			8-30-99
92		6,442,507	8-27-02	Skidmore et al.			12-29-98
93		6,470,195	10-22-02	Meyer			10-31-00
94		6,487,417	11-26-02	Rossoni et al.			11-24-99
95		6,493,679	12-10-02	Rappaport et al.			5-26-99
96		6,496,290	12-17-02	Lee			12-17-98
97		6,499,006	12-24-02	Rappaport et al.			7-14-99
98		6,505,045	1-7-03	Hills et al.			4-10-00
99		5,586,254	12-17-96	Kondo			

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100		6,085,335	7-4-00	Djoko et al.			12-31-97
101		5,710,758	1-20-98	Soliman et al.			9-29-95
102		5,821,937	10-13-98	Tonelli et al.			8-12-96
103		5,774,669	6-30-98	George et al.			7-28-95
104		5,802,146	9-1-98	Dulman			11-22-95
105		5,825,759	10-20-98	Liu			7-24-95
106		5,845,124	12-1-98	Berman			5-1-96
109		6,199,032	3-6-01	Anderson			7-22-98
110		5,467,441	11-14-95	Stone et al.			10-6-94
111		6,243,772	6-5-01	Ghori et al.			1-31-97
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From Bird's Eye Real-time Mapping Software dated 6-30-02

IEEE Transactions on Antennas and propagation, Vol. 46, No. 8, August 1998. " Effect of Terrain on Path Loss in Urban Enviroments for Wireless Applications" Leonard Piazz and Henry L. Bertoni

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2 G. Durgin, T.S. Rappaport, H. Xu, Measurements and Models for Radio Path Loss and Penetration Loss in and Around Homes and Trees at 5.85 GHz, IEEE Transactions on Communications, vol. 46, no. 11, November 1998.

3 C.M. Peter Ho et al., "Antenna Effects on Indoor Obstructed Wireless Channels and a Deterministic Image-Based Wide-Band Propagation Model for In-Building Personal Communications Systems," International Journal of Wireless Information Networks, Vol. 1, No. 1, 1994.

4 S. Kim et al., "Radio Propagation Measurements and Predictions Using Three-dimensional Ray Tracing in Urban Environments at 908 MHZ and 1.9 GHz," IEEE Transactions on Vehicular Technology, vol. 48, no. 3, May 1999

5 T.S. Rappaport et al., "Use of Topographic Maps with Building Information to Determine Antenna Placements and GPS Satellite Coverage for Radio Detection and Tracking in Urban Environments," MPRG Technical Report MPRG-TR-95-14, Virginia Tech, September 1995

6 R.K. Morrow, Jr. and T.S. Rappaport, "Getting In," Wireless Review Magazine, March 2000.

7 Wireless Valley Communications, Inc., "SitePlanner 3.16 for Windows 95/98/NT User's Manual," Software User's Manual, pp.5-148 to 5-156, 1999.

8 M. Panjwani et al., "Interactive Computation of Coverage Regions for Wireless Communication in Multifloored Indoor Environments," IEEE Journal on Selected Areas in Communications, Vol. 14, No. 3, April 1996.

9 L Piazzoli and H.L. Bertoni, "Achievable Accuracy of Site-Specific Path-Loss Predictions in Residential Environments" IEEE Transactions on Vehicular Technology, vol. 48, no. 3, May 1999.

10 T.S. Rappaport et al., "Wireless Communications: Past Events and a Future Perspective", IEEE Communications Magazine, May 2002.

11 T.S. Rappaport et al., "Radio Propagation Prediction Techniques and Computer-Aided Channeling Modeling for Embedded Wireless Microsystems," ARPA Annual Report, MPRG Technical Report MPRG-TR-94-12, Virginia Tech, July 1994.

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13	D. Ullmo et al., "Wireless Propagation in Buildings: A Statistical Scattering Approach," IEEE Transactions on Vehicular Technology, Vol. 48, No. 3, May 1999.
14	T.S. Rappaport, "wireless Communications: Principles and Practice" Second Edition, Prentice Hall, 2002.
15	T.S. Rappaport et al., "Use of Topographic Maps with Building Information to Determine AntennaPlacements and GPS Satellite Coverage for Radio Detection and Tracking in Urban Environments," MPRG Technical Report MPRG-TR-95-14, Virginia Tech, September 1995.
16	T.S. Rappaport et al., "Indoor Path Loss Measurement for Homes and Apartments at 2.4 and 5.85 GHz," private report produced for Motorola, December 16, 1997.
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**INFORMATION DISCLOSURE CITATION**

(Use several sheets if necessary)

Docket Number (Optional) 02560035BC	Application Number not assigned
Applicant(s) <b>T. Rappaport, et al.</b>	
Filing Date concurrently	Group Art Unit not assigned

*EXAMINER INITIAL	OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)
	Company Web Page "Actix" www.actix.com product name: E-NOS ( now E-AMS)
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1	Software by Andrew titled "RF Planner" dated 6-17-97  2. A user guide titled "Andrew Microwave System Planner" dated 7-99  3. A user guide titled "Andrew Antenna System Panner" dated 6-99

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Group Art Unit

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REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						YES	NO

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)


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